Chapter IV

SOME OTHER SUPPORTS FOR THE MECHANICAL BIOLOGY

TO OUR survey of the strictly mechanistic theories I add in this chapter, first, some recent discoveries which seem to support this type of biology; secondly, a brief critical statement of the now so-much-discussed *Gestalt* theory as applied to the problems of regulation and morphogenesis. It may be said to be the one serious attempt to suggest a physical theory of the organic functions.

Under the first heading, I refer to some recent additions to our knowledge of the very simplest forms of life. It is frequently asserted that the cell is the unit constituent of all living things, and the unicellular organism the simplest form of life. It is surprising to find these statements repeated in face of the not very recent knowledge of bacteria and cocci which, lacking some of the characteristics of cells, nevertheless present many of the distinctive life-phenomena, including growth, reproduction, stability, and even rudimentary organization and morphogenesis. For many of these very simple organisms have shapes characteristic of each species ; and the cocci of different species arrange themselves in characteristic groups such as chains, pairs, and other simple forms ; and they manifest very constant and delicate chemical reactions, especially the agglutination reactions peculiar to each species or variety.